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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,948	12/19/2000	Shigeru Okita	313MC/49472	5315

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EXAMINER

NGUYEN, XUAN LAN T

ART UNIT PAPER NUMBER

3683

DATE MAILED: 04/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,948

Applicant(s)

OKITA ET AL.

Examiner

Lan Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figures 20-24 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the contact angle must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because the abstract is longer than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-7 and 11-14 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed feature "contact angle" is not described nor illustrated in the disclosure.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- • Claims 1, 8, 9 and 10 claim "selectively having a cage". This renders the claims indefinite.
- Claims 1-14 are replete with the alternative form "or" which make them indefinite. For example, "oil or grease ... or in ... a gas" in claim 1.
- Claims 6 and 7 claim "obstacles" and "a layer of harness". They appear to be a straight translation and do not provide appropriate meanings for the claims.
- These are a few examples of the errors in claims 1-14. The Examiner urges the Applicant to review the claims carefully and make the appropriate corrections.

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin (USP 5,273,413) in view of Kinno et al (USP 5,845,997).

Wallin shows a rolling bearing, as in the present invention, comprising: an outer ring, an inner ring, rolling elements as shown in figure 2, with a contact angle of 30 degrees in the abstract. Wallin is silent of how the bearing is lubricated. Kinno et al. teaches the concept of using polytetrafluoroethylene (PTFE) to lubricate bearings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have considered using PTFE as a lubricant for Wallin's bearing in order to keep the bearings working sufficiently even in harsh environment as taught by Kinno et al.

Re: claim 2, Wallin shows in the abstract, the contact angle is 30 degrees.

Re: claim 7, the claimed feature is considered a design feature where the hardness of the rolling bodies and the hardness of the raceways can be designed to accommodate different applications.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin (USP 5,273,413) in view of Kinno et al. (USP 5,845,997) and further in view of Tanaka et al. (USP 5,998,042).

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Wallin's bearing, as modified, is silent of the material make up of the rolling elements. Tanaka et al. teach the use of rolling elements wherein the elements are made of steel with at least 10% by weight of Cr in the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used rolling elements with the content of steel with at least 10% by weight of Cr as taught by Tanaka in order to provide strength and wear resistance to the rolling elements.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin (USP 5,273,413) in view of Kinno et al. (USP 5,845,997) and further in view of Niizeki (JP 09229072 A).

Wallin's bearing, as modified, lacks the absent of obstacles with a mean diameter of 3 or more. Niizeki teaches the concept of having a raceway surface without obstacles of mean diameter of 3 or more in the abstract to improve the performance of the bearing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have construct Wallin's bearing with raceway surface without obstacles of mean diameter of 3 or more to improve the performance of the bearing as taught by Niizeki.

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niizeki (JP 09229072 A) in view of Yasui et al. (JP 06165790 A) and further in view of Masuda et al. (USP 5,199,799).

Niizeki show a rolling bearing with an outer race 2, an inner race 3, rolling elements 4, a cage 5 wherein said cage is made of PTFE in the abstract. Niizeki lacks

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the chamfering on both sides of the cage and having a hole on the bottom. Yasui et al. teach the concept of chamfering the sides of the cage. Masuda et al. teach the concept of having a hole on the bottom of the cage. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Niizeki's bearing with a chamfered cage having holes on the bottom of the cage in order for lubrication to be evenly distributed within the cage as taught by Yasui and Masuda.

Allowable Subject Matter

13. Claims 3, 5 and 11-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. Claims 8 and 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsui et al., Tanako, Tanako et al. and Nakamura show various bearings.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 9 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

XLN

XLN
March 21, 2002



PAUL N. DICKSON
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